9:45

774-6 Safety of Amlodipine in Severe Heart Failure: Reduction of Sudden Death in Non-Ischemic Heart Disease

Milton L. Pressler, Peter E. Carson, Alan B. Miller, John H. Wertheimer, Christopher M. O'Connor, Gerald W. Neuberg, David J. Frid, Robert N. Belkin, Anne B. Cropp for the PRAISE Investigators. *Indiana University, Indianapolis, IN*

Sudden cardiac death (SCD) accounts for ≈50% of chronic heart failure (HF) deaths. The PRAISE trial suggested a potential role for amlodipine (Amlo) in HF but the safety and efficacy of Ca channel blockers has become controversial. After blinded adjudication of endpoints in 1153 patients with NYHA Class III–IV HF, we analyzed the frequency and characteristics of SCD and life-threatening VT/VF. Over a median follow-up of 14.5 mos, 182 had SCD and 29 had VT/VF. The efficacy of Amlo vs placebo (Plac) showed a significant interaction for prespecified ischemic (Isch) and non-ischemic (NI) strata. There were no significant differences among groups in NYHA class, ECG parameters, usage of pacemakers or ICDs.

Parameter	Plac-Isch	Amlo-Isch	Plac-NI	Amlo-NI
No.	370	362	212	209
Age (yr)	68 ± 9	69 ± 10	62 ± 15	59 ± 11
LVEF (%)	21 ± 6	21 ± 5	19 ± 6	20 ± 6
No. SCD	65 (17.5%)	58 (16%)	38 (18%)	21 (10%)*
No. VT/VF	11 (3%)	9 (2.5%)	8 (4%)	1 (0.5%)

*P = 0.05 compared to Plac

In the Isch stratum, there was no significant difference in SCD but in the NI stratum, Amlo reduced SCD by 44% (P = 0.05) and reduced combined SCD + VT/VF by 51% (P < 0.01) as compared to Plac. The results suggest that patients with severe HF and ischemic heart disease may be safely treated with Amlo without increasing SCD. Amlo does not appear to promote life-threatening VT or VF and may stabilize the arrhythmogenic substrate in non-ischemic types of heart failure.

775 Coronary Disease and Mitral Valve Disease in the Elderly: Lessons from Observational Databases

Wednesday, March 27, 1996, 8:30 a.m.–10:00 a.m.
Orange County Convention Center, Room 209

8:30

775-1 The Beneficial Effect of Lisinopril on Left Ventricular Remodelling After a First Myocardial Infarction Is Modulated by Age. The GISSI-3 Echo Database

Roberto Latini, Gianluigi Nicolosi, Aldo P. Maggioni, Maria G. Franzosi, Simona Barlera, Serge Masson on behalf of the GISSI-3 Investigators. *ANMCO and Istituto 'M. Negri', Italy*

Elderly pts are considered to be at high risk after myocardial infarction (MI). In GISSI-3 lisinopril (L) started within 24 h after MI and continued for 6 weeks showed a larger benefit in pts > 70 y than in younger pts. We analyzed ejection fraction (EF), end-diastolic (EDVI) and end-systolic (ESVI) volume indexes in 2-D echo at predischarge (pD) and 6 weeks (6w) from 5181 pts with first MI from GISSI-3 trial.

Pts with wall motion asynergy (WMA) ≥ 27% at pD were 32% in > 70 y, but only 24% in ≤ 70 y (p < 0.001). Therefore data on EDVI changes (6w-pD) are presented as a function of age and WMA (table; mean ± SEM).

Age	WMA (%)	n of pts	ΔEDVI (ml*m^{-2})	
			L	no-L
≤ 70 y	< 27	3162	−0.3 ± 0.2	−0.8 ± 0.3
	≥ 27	1012	0.5 ± 0.6	1.8 ± 0.6
> 70 y	< 27	682	−0.6 ± 0.5	0.3 ± 0.6
	≥ 27	325	−1.3 ± 1.2	2.4 ± 0.9

2-way ANOVA: age × treatment, p < 0.01; WMA × treatment, p < 0.001

L consistently reduced EDVI enlargement in high WMA pts and this effect tended to be larger in pts > 70 y. Similar effects were found for ESVI, although not statistically significant. EF tended to increase over time of about 1%, but the effects of L were not significant.

In conclusion, a 6w treatment with L reduced LV enlargement in pts with WMA ≥ 27% and more so in those > 70 y of age. These findings are consistent with the clinical benefit observed in the elderly in GISSI-3 trial.

8:45

775-2 Does Mode of Pacing Affect Long-Term Survival in the Octagenerians and Nonagenarians?

Arshad Jahangir, Win K. Shen, Sharon A. Neubauer, Stephen C. Hammill, David O. Hodge, David L. Hayes. *Mayo Clinic, Rochester, MN*

Impact of pacemaker (PM) on relief of symptoms related to conduction system disease in the elderly population has been well documented. However, long-term survival outcome following PM implantation in octagenarians and nonagenarians, particularly with respect to mode of pacing, has been sparse. In this study, survival of all pts (584) ≥ 80 yrs of age underwent PM implantation at the Mayo Clinic from 1980–1992 was determined (Kaplan-Meier method) Patients with chronic atrial fibrillation were excluded from pacing mode comparisons leaving 432 pts for analysis. The mean age of study group was 84.5 ± 3.9 yrs; the mean follow-up was 3.5 ± 2.6 yrs. Survival outcomes are shown below:

Pacing Mode	Pts (n)	Survival, %			P
		1 yr	3 yr	5 yr	
SC	310	80	57	45	0.0003
DC	122	92	76	58	

SC: single chamber; DC: dual chamber

Multivariate analysis determined the following independent predictors for increased mortality: age (p ≤ 0.0001), NYHA functional class (p ≤ 0.0001), co-morbid medical illnesses (p ≤ 0.0001), and hypertension (p = 0.0017). Pacing mode, year of implant, type of conduction disease, and history of PAF were not independent predictors of mortality (p > 0.05). Selection bias in favor of DC pacing included: younger age (p = 0.0003), cognitively (p = 0.0023), and physically (p = 0.013) independent pts.

Conclusions: 1) The apparent survival benefit of DC pacing is likely due to differences in pt selection. 2) Independent predictors for long-term survival would assist us in careful evaluation and selection of mode of pacing in the very elderly.

9:00

775-3 Cardiac Surgery in the Elderly: Analysis of Outcome in Patients With Mitral Regurgitation

Maurice E. Sarano, Robert L. Frye, Hartzell V. Schaff, Thomas A. Orszulak, A. Jamil Tajik. *Mayo Clinic, Rochester, MN*

Cardiac surgery in the elderly is considered as carrying a high risk and, therefore, is often limited to patients with refractory heart failure. The outcome of surgical correction of mitral regurgitation was analyzed in 824 patients operated between 1980 and 1991, 327 < 65 years, and 497 ≥ 65 years (167 ≥ 75 years). Patients ≥ 65 years compared to those < 65 years had more often ischemic mitral regurgitation (25% vs 18%, p = 0.017), class III–IV symptoms (69% vs 53%, p < 0.0001), coronary disease (54% vs 33%, p < 0.0001), and associated coronary surgery (46% vs 29%, p < 0.0001). However, they had similar ejection fraction (57 ± 13% vs 59 ± 13%, p = 0.13) and valve repair was equally feasible (55% vs 57%, p = 0.62). Although *operative mortality* was higher (11.5% vs 4.9%, p = 0.001) in the elderly patients, it improved in all subgroups throughout the study period:

Age	Study Period		
	1980–83	1984–87	1988–91
< 65	6.8%	4.6%	3.8%
≥ 65, < 75	21%	6.8%	3.8%
≥ 75	29%	17.2%	7.7%

Feasibility of valve repair improved similarly in all three age groups (p < 0.0001) to > 70% in the 1988–1991 period.

Postoperative survival was worse in the elderly patients (at 10 years 40 ± 3.5% vs 68 ± 3.4%, p = 0.0001) but, observed to expected survival ratios were similar in patients < 65, 65 to 75 years (p = 0.13) and ≥ 75 years (p = 0.10).

We conclude that cardiac surgery for mitral regurgitation in the elderly can be accomplished 1) with a high proportion of valve repair, 2) with a higher risk than in younger patients but with marked recent improvement, 3) with observed to expected survival ratios similar in all age groups and, therefore, 4) is a reasonable option when carefully judged in each individual elderly patient.